

BROADBAND DIPLEXER

DPX-1721

The DPX-1721 is a broadband low pass/high pass diplexer capable of multiplexing low frequency (DC-17 GHz) and high frequency (21.5-40 GHz) signals. The novel design offers extremely low insertion loss and high isolation between the low pass and high pass channels. The DPX-1721 is an excellent solution for applications such as high frequency/baseband signal routing (especially following a broadband high frequency mixing stage), low loss power splitting/combination, separation of harmonic tones, and general-purpose lab use.



Features

- Broadband performance
- Low insertion loss
- High isolation between low pass and high pass ports
- Lightweight, compact design

Electrical Specifications – Specifications guaranteed from -55 to +100°C, measured in a 50Ω system.

Parameter	Frequency Range (GHz)	Min	Typ	Max
Low Pass Filter				
Pass Band Insertion Loss (dB)	DC-17		1.2	
Stop Band Rejection (dB)	21.5-40	40	50	
Pass Band Return Loss (dB)	DC-17	12	20	
High Pass Filter				
Pass Band Insertion Loss (dB)	21.5-40		1.5	
Stop Band Rejection (dB)	DC-17	25	40	
Pass Band Return Loss (dB)	21.5-40	8	12	
Common Port Return Loss (dB)	DC-17	12	20	
	21.5-40	8	12	
Isolation (dB)	DC-17	25	40	
	21.5-40	40	50	
Impedance (Ω)			50	
RF Power (W)				1
Weight (g)			20	

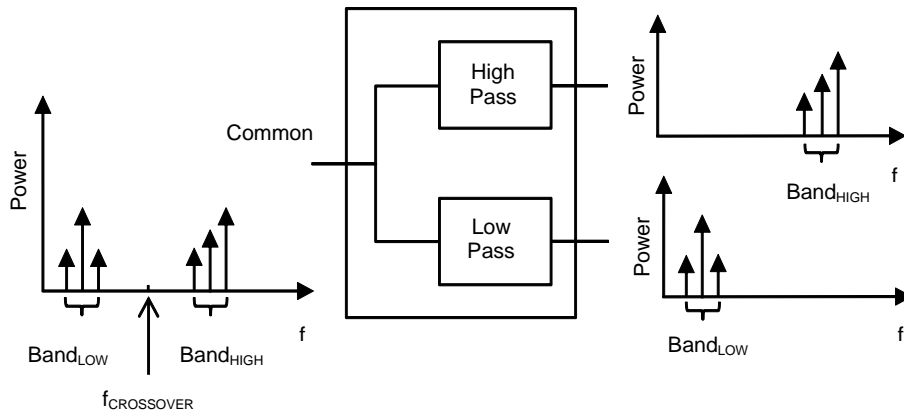


Fig. 1. Schematic Diagram

Typical Performance

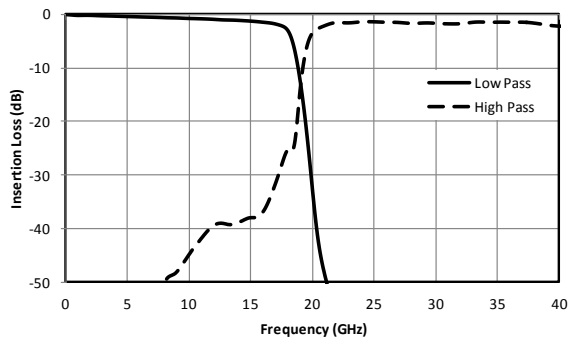


Fig. 2. Insertion loss.

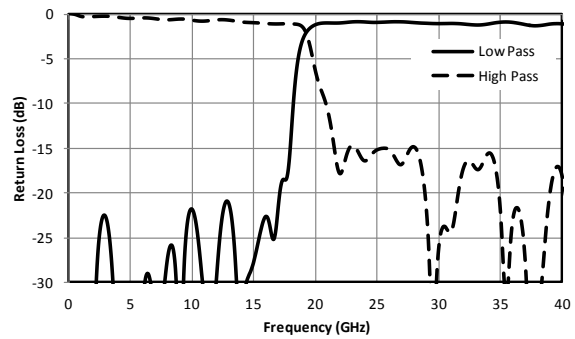


Fig. 3. Return loss.

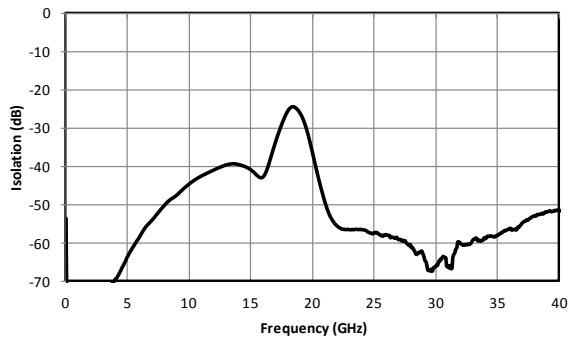


Fig. 4. Isolation.

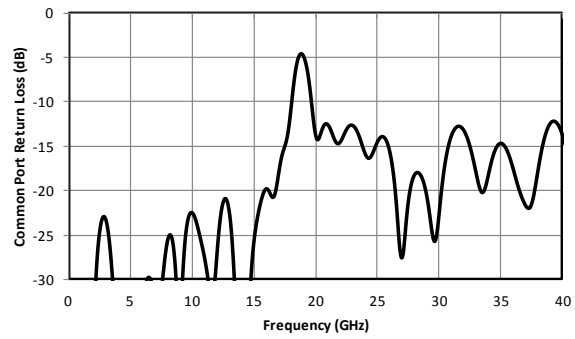
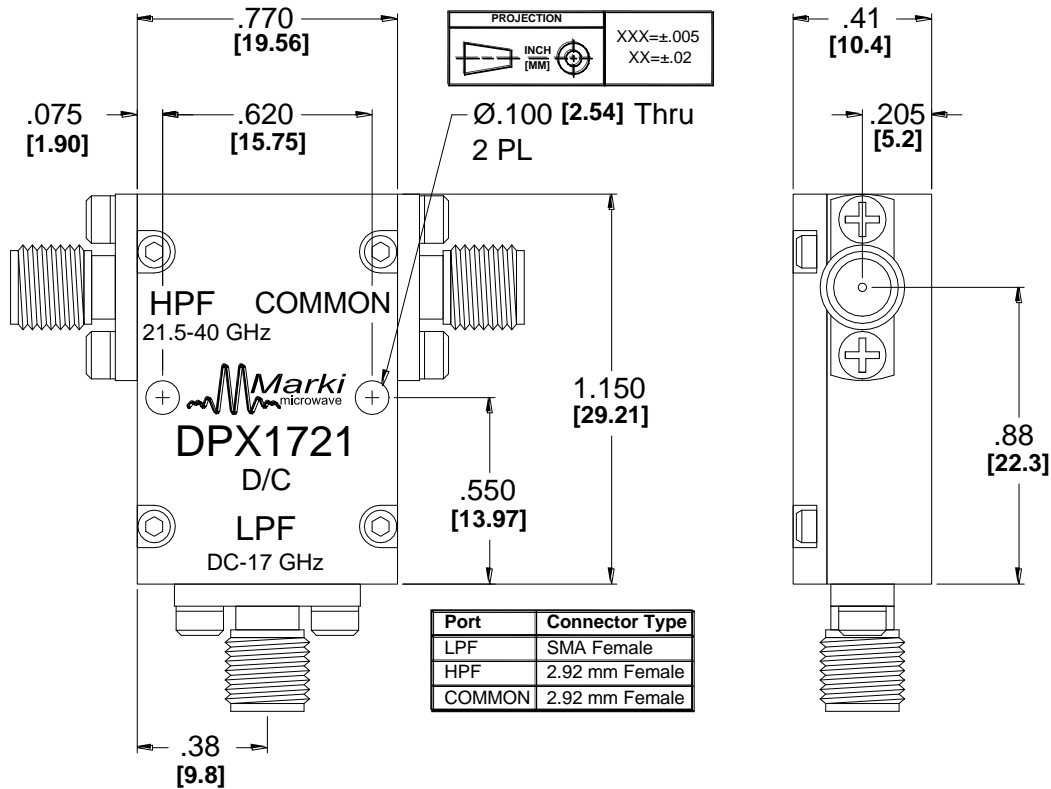


Fig. 5. Common port return loss.

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Page 3



Model Number	Description	S-Parameters
DPX-1721	DC-17 GHz Low Pass, 21.5-40 GHz High Pass P1- High Pass, P2- Common, P3- Low Pass with 2.92 mm connectors ¹ on P1 and P2, and SMA Female connector ¹ on P3	DPX-1721.S3P

¹Contact factory for other connector options.

NOTE:
Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.

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